



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2011-1323; Directorate Identifier 2010-NM-212-AD; Amendment 39-17018; AD 2012-08-02]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Model A330-200 and -300 series airplanes; Model A330-223F and -243F airplanes; and Model A340-200, -300, -500, and -600 series airplanes. This AD was prompted by a report that during the evaluation of engine failures at take-off on Airbus flight simulators, it has been shown that with flight control primary computer (FCPC) 1 inoperative, in worst case scenario when FCPC2 and FCPC3 resets occur during rotation at take off, a transient loss of elevator control associated with a temporary incorrect flight control law reconfiguration could occur. This AD requires revising the Limitations section of the applicable airplane flight manual. We are issuing this AD to prevent movement of the elevators to zero position, which could result in inducing a pitch down movement instead of a pitch up movement needed for lift off, resulting in loss of controllability of the airplane.

**DATES:** This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1138; fax (425) 227-1149.

#### **SUPPLEMENTARY INFORMATION:**

##### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the Federal Register on December 22, 2011 (76 FR 79560). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

On A330/A340 aeroplanes, the Flight Control Primary Computer 2 (FCPC2) and FCPC3 are supplied with power from the 2PP bus bar. Electrical transients on the 2PP bus bar occur, in particular during engine n.2 failure on A330 aeroplanes or engine n.3 failure on A340 aeroplanes. Such electrical transients lead to a FCPC2 reset. FCPC3 reset does not occur thanks to the introduction of second electrical power supply to FCPC3 from 1PP bus bar associated to the Electrical Contactor Management Unit (ECMU) standard 5.

During the evaluation of specific engine failure cases at take-off on Airbus flight simulators, it has been evidenced that with FCPC1 inoperative, in the worst case, when FCPC2 and FCPC3 resets occur during rotation at take off, a transient loss of elevator control associated with a temporary incorrect flight control law reconfiguration could occur. This condition leads to a movement of the elevators to the zero position, which induces a pitch down movement instead of a pitch up movement needed to lift off. In addition, it leads to a limitation of the pilot control on pitch axis and limits the pilot capacity to counter the pitch down movement during this flight phase, which constitutes an unsafe condition.

To prevent such condition, [EASA] Emergency Airworthiness Directive (EAD) 2008-0010-E was issued to prohibit aeroplanes dispatch with FCPC1 inoperative (from GO to NO-GO) for certain aeroplane configurations. For other configurations, dispatch is allowed when the integrity of the FCPC3 second electrical power supply is ensured.

EASA AD 2008-0010R1 was issued to:

- For A340-500/-600, alleviate the dispatch restriction on aeroplanes fitted with new FCPC Standard W11 (part number (P/N) LA2K2B100GA0000)

and

- For A330 and A340-200/-300, to take into account the possibility to embody in service a new FCPC3 second electrical power supply equivalent to the production one.

This [EASA] AD, which supersedes EASA AD 2008-0010R1 retaining its requirements, is issued to extend the applicability to the newly certified models A330-223F and A330-243F.

The FAA did not issue corresponding ADs for EASA Airworthiness Directive 2008-0010-E and EASA Airworthiness Directive 2008-0010R1 since it was determined at that time that the FAA Master Minimum Equipment List (MMEL) was an acceptable method for controlling exposure of the U.S. fleet to the safety issue addressed in the

EASA ADs. Since that decision was made, the FAA determined that an AD is needed to control dispatch restrictions. In addition, EASA Airworthiness Directive 2010-0109, dated June 28, 2010, added two new Airbus models in the applicability and we are proceeding with this FAA AD in order to address the identified unsafe condition for the U.S. fleet. You may obtain further information by examining the MCAI in the AD docket.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comment received. The commenter, Air Line Pilots Association, International, supports the NPRM (76 FR 79560, December 22, 2011).

### **Explanation of Changes Made to this AD**

We have made the following changes to this AD:

- Redesignated Note 2 to paragraph (g) of the NPRM (76 FR 79560, December 22, 2011) as paragraph (g)(4) of this AD, and redesignated subsequent notes accordingly.
- Redesignated paragraph (h) of the NPRM (76 FR 79560, December 22, 2011) as paragraph (h)(1) of this AD.
- Redesignated Note 3 to paragraph (h) the NPRM (76 FR 79560, December 22, 2011) as paragraph (h)(2) of this AD.
- Updated paragraph reference in paragraph (h)(2) of this AD.
- Updated paragraph references in Note 2 to paragraph (h)(1) of this AD.

### **Conclusion**

We reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously – except for minor editorial changes. We have determined that these changes:

- Are consistent with the intent that was proposed in the NPRM (76 FR 79560, December 22, 2011) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (76 FR 79560, December 22, 2011).

### **Costs of Compliance**

We estimate that this AD will affect 55 products of U.S. registry. We also estimate that it will take about 1 work-hour per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$4,675 or \$85 per product.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

## **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM (76 FR 79560, December 22, 2011), the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

**2012-08-02 Airbus:** Amendment 39-17018. Docket No. FAA-2011-1323; Directorate Identifier 2010-NM-212-AD.

#### **(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to Airbus Model A330-201, -202, -203, -223, -223F, -243, -243F, -301, -302, -303, -321, -322, -323, -341, -342, and -343 airplanes; and Model A340-211, -212, -213, -311, -312, -313, -541, and -642 airplanes; certificated in any category; all serial numbers.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 27: Flight Controls.

**(e) Reason**

This AD was prompted by a report that during the evaluation of engine failures at take-off on Airbus flight simulators, it has been shown that with flight control primary computer (FCPC) 1 inoperative, in worst case scenario when FCPC2 and FCPC3 resets occur during rotation at take off, a transient loss of elevator control associated with a temporary incorrect flight control law reconfiguration could occur. We are issuing this AD to prevent movement of the elevators to zero position, which could result in inducing a pitch down movement instead of a pitch up movement needed for lift off, resulting in loss of controllability of the airplane.

**(f) Compliance**

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

**(g) Airplane Flight Manual (AFM) Revision for Certain Airplanes**

For airplanes identified in paragraph (c) of this AD, except for airplanes identified in paragraphs (g)(1), (g)(2), and (g)(3) of this AD: Within 30 days after the effective date of this AD, revise the Limitations section of the applicable AFM to include the following statement. This may be done by inserting a copy of this AD into the AFM.

Dispatch with the FCPC “PRIM 1” inoperative is prohibited.

Note 1 to paragraph (g) of this AD: When a statement identical to that in paragraph (g) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.



(1) Model A330-223F and -243F airplanes.

(2) Model A330-200 and -300 series airplanes, and Model A340-200 and -300 series airplanes, on which Airbus modification 44385 has been embodied either in production or in service by Airbus Service Bulletin A330-27-3159 or Airbus Service Bulletin A340-27-4158; and on which Airbus modification 44431 has been embodied either in production or in service by Airbus Service Bulletin A330-24-3011 or Airbus Service Bulletin A340-24-4019.

(3) Model A340-500 and -600 series airplanes on which Airbus modification 57698 has been embodied either in production or in service by Airbus Service Bulletin A340-27-5046.

(4) This dispatch restriction applies primarily to Model A330-200 and -300 series airplanes, and Model A340-200 and -300 series airplanes, which have embodied Airbus Service Bulletin A330-27-3040 or Airbus Service Bulletin A340-27-4046 in service.

**(h) AFM Revision for Certain Other Airplanes**

(1) For Model A330-200 and -300 series airplanes, and Model A340-200 and -300 series airplanes, on which Airbus modification 44385 has been embodied either in production or in service by Airbus Service Bulletin A330-27-3159 or Airbus Service Bulletin A340-27-4158; and Airbus modification 44431 has been embodied either in production or in service by Airbus Service Bulletin A330-24-3011 or Airbus Service Bulletin A340-24-4019: Within 30 days after the effective date of this AD, revise the Limitations section of the applicable AFM to include the following statement. This may be done by inserting a copy of this AD into the AFM.

Dispatch with the FCPC “PRIM 1” inoperative is allowed provided that the operational test of the FCPC3 second electrical power supply is successfully performed, in accordance with the instructions of Airbus AOT A330-27A3158, or AOT A340-27A4157, as applicable, before the first flight of the MMEL interval.

If the test is not successful, repair in accordance with the instructions of Airbus AOT A330-27A3158 or AOT A340-27A4157, as applicable, before dispatch with FCPC “PRIM 1” inoperative.

Note 2 to paragraph (h)(1) of this AD: When a statement identical to that in paragraph (h)(1) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

(2) Model A330-223F and -243F airplanes are not affected by paragraph (h) of this AD.

**(i) AFM Revision for Model A330-223F and A330-243F Airplanes**

For Model A330-223F and A330-243F airplanes: Within 30 days after the effective date of this AD, revise the Limitations section of the AFM to include the following statement. This may be done by inserting a copy of this AD into the AFM.

Dispatch with the FCPC “PRIM 1” inoperative is allowed provided that the operational test of the FCPC3 second electrical power supply is successfully performed, in accordance with the instructions of Airbus AOT A330-27A3158, before the first flight of the MMEL interval.

If the test is not successful, repair in accordance with the instructions of Airbus AOT A330-27A3158, before dispatch with FCPC “PRIM 1” inoperative.

Note 3 to paragraph (i) of this AD: When a statement identical to that in paragraph (i) of this AD has been included in the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

**(j) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Vladimir Ulyanov, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-1138; fax (425) 227-1149. Information may be e-mailed to: [9-ANM-116-AMOC-REQUESTS@faa.gov](mailto:9-ANM-116-AMOC-REQUESTS@faa.gov). Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is

airworthy before it is returned to service.

**(k) Related Information**

Refer to MCAI European Aviation Safety Agency Airworthiness Directive 2010-0109, dated June 28, 2010, for related information.

**(l) Material Incorporated by Reference**

None.

Issued in Renton, Washington, on April 5, 2012.

Ali Bahrami,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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